



# Franklin Boulevard & 3rd Avenue North/Industrial Road Intersection

*ITD Freight Program Application*

City of Nampa  
411 3<sup>rd</sup> Street South  
Nampa, Idaho 83651

## Contact Person

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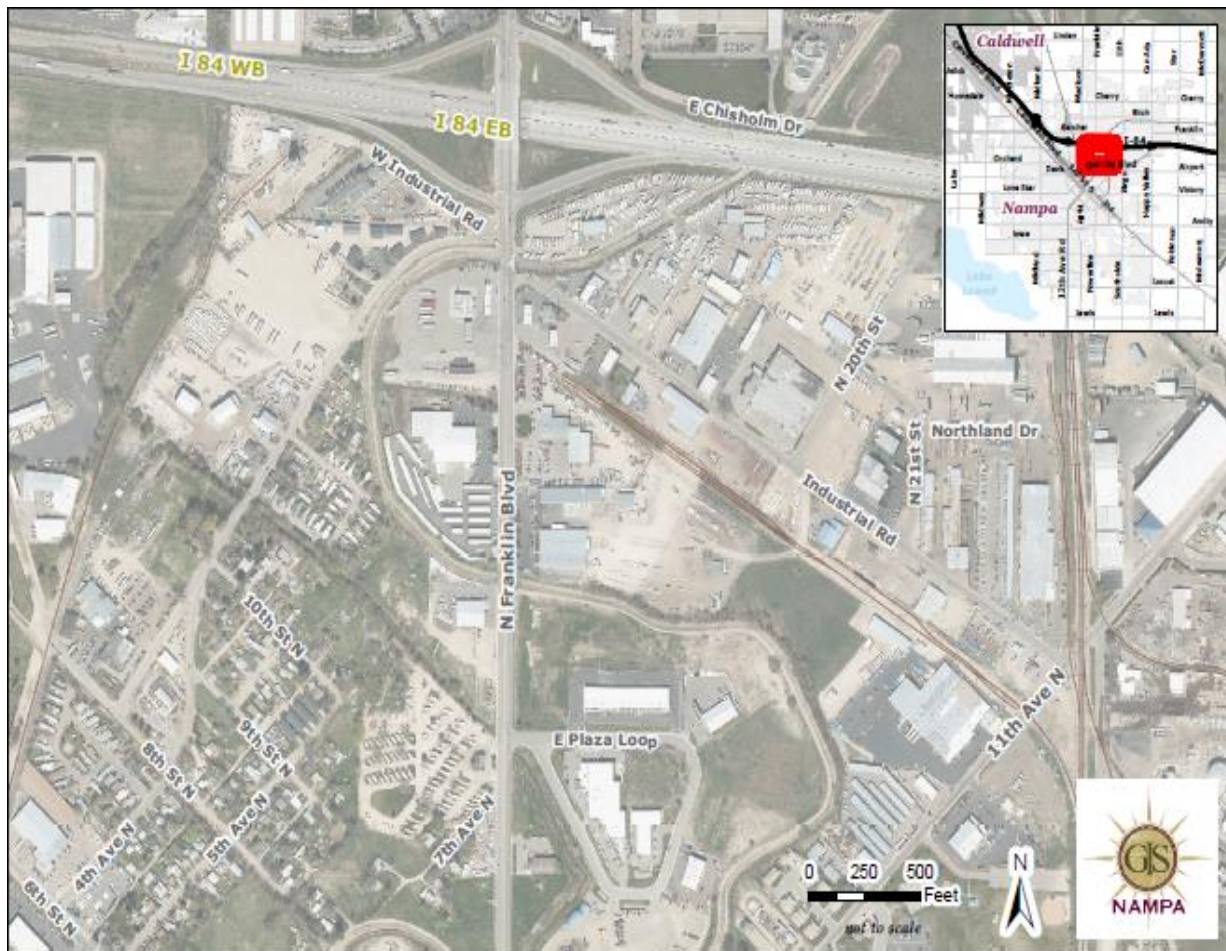
## **PROJECT DESCRIPTION**

The City of Nampa is seeking ITD Freight Program funding to provide freight capacity improvements at the intersection of Franklin Boulevard & 3rd Avenue North/Industrial Rd.

Franklin Blvd. serves a large freight mobility demand due to several industrial and commercial businesses in the vicinity justifying its designation as a critical freight corridor by the Community Planning Association of Southwest Idaho (COMPASS) (reference the COMPASS Freight Study, 2017).

The City Council and Public Works Department invested \$25,000 in a pre-concept study to examine options to improve freight congestion and safety at the intersection. The study revealed the stop-controlled intersection operates at the lowest level of service (LOS) F during peak hours. The intersection lies just over 100 feet from the I-84 Eastbound on-ramp, adding to the significant congestion and high accident history.

HDR Engineering, Inc conducted the pre-concept study for the area and identified improvement alternatives in the area (figure 1) for freight mobility as it relates to freight traffic accessing Franklin Blvd and I-84.



*Figure 1 (Vicinity Map)*

## **BACKGROUND & PROJECT NEED**

There are two major issues with the area's existing infrastructure that make accommodating large trucks more challenging:

### **1. The Phyllis Canal Bridge at Franklin Boulevard North of Industrial Rd.**

- The structure is in poor condition and needs to be replaced.
- It does not have shoulders or pedestrian facilities.
- Structure width and proximity to Industrial Rd. impacts westbound right turning movements along Industrial Rd., especially for large trucks with more off tracking need.
- The curb radius is minimal and existing barrier further impacts right turn movements for large trucks due to length and over tracking of trailers.
- These constraints require a truck and trailer to encroach into Franklin Blvd. potentially taking up both northbound lanes and even the two-way left turn lane(TWLTL) to make a right turn.

### **2. Close spacing of Intersection to I-84 Eastbound and Westbound Ramp Intersections.**

- Two-way Left turn (TWLT) storage between the intersections is limited with approximately 160' between Industrial Rd. and 3rd Ave. North and 120' between 3rd Ave. North and I-84 eastbound ramp.
- The southbound left turn movement at Industrial road has a direct head-on conflict with the northbound left turn movement at 3rd Ave. North.
- Forty-Five crashes occurred at the intersection within the last five years—twelve of which were head-on.



## **DESIGN ALTERNATIVE**

HDR Engineering, Inc evaluated seven options and recommended the following proposed alternative (Figure 2) that addresses safety and mobility as well as economic impacts to the local business community in the area.



*Figure 2 (Design Map)*

This preferred design will create a new signalized intersection approximately ¼ mile south of the existing Franklin Blvd. and Industrial Rd. intersection. Notable features of the design include:

- Existing intersections at Franklin Blvd. & Industrial Rd., Franklin Blvd. & 3<sup>rd</sup> Ave. North will be closed with cul-de-sacs.
- Build new local street east of Franklin Blvd. and will require a new structure at the Phyllis Canal crossing.
- New local street east of Franklin Blvd. will require a relocated at grade rail crossing.

- New local street west of Franklin Blvd. will require a new structure at the Mason Creek crossing.
- New local street west of Franklin Blvd. will require improvements to 5<sup>th</sup> Avenue North.
- Access improvements along Franklin Blvd. (Jacksons store) will be addressed to reduce conflict points.

This Project will be divided in 2 phases. East of the intersection (figure 4) completed constructed first and then later on west of the intersections (Figure 3) would be constructed.



Figure 3 (West of Intersection)

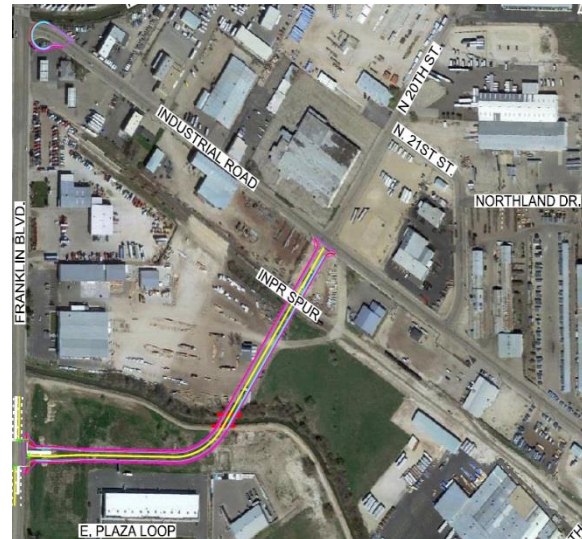


Figure 4 (East of intersection)

## **PROJECT ESTIMATED COST**

Preliminary Engineering			\$313,000
Administrative Costs			\$100,000
Right-of-Way			\$818,000
Construction Items			\$3,127,000
Mobilization			\$157,000
Construction Engineering & contingencies			\$657,000
Total cost (both phases)	East Leg + East cul-de-sac + intersection	West leg + West cul-de-sac	
	\$3,146,000	\$2,025,000	
<b>Total cost (whole project)</b>			<b>\$5,171,000</b>

## Estimated Cost

Item Description	Unit	Approx Quantity				Cost price		
			West Cul-de-sac	East-Cul-de-sac	Intersection	West Cul-de-sac	East-Cul-de-sac	Intersection + West leg and East Leg
Preliminary Engineering								
Preliminary Engineering	%	10%				\$12,300	\$5,280	\$295,140
Right-of-way								
Number of Parcels	EA	\$11,000						
Cost of land	SF	\$5.5	7906	3798	137075	\$43,483	\$20,889	\$753,913
Utility Adjustments								
Adjust Valve cover	EA	\$550						
Adjust manhole	EA	\$835						
Adjust MISC	EA	N/A				\$6,600		
Earthwork								
Granular borrow	CY	\$33						
Excavation	CY	\$22	689	280	5632	\$15,158	\$6161	\$123904
Drainage and minor structures								
Removal of Catch basin	EA	\$402						
Removal of inlet	EA	\$646						
Removal of Manhole	EA	\$844						
Pipe	FT	\$55						
Manhole	EA	\$3850						
Inlet	EA	\$3300						
Misc	EA	N/A						
Pavement and Base								
Rem of Pavement	SY	\$5.5	1271	227	1736	\$6,990	\$1,249	\$9,548
New Pavement	SY	\$33	1377	560	11265	\$45,440	\$18480	\$371,745
Bridge/Grade Separation Structures								
Rem of Box Culvert	EA	\$27,500						
Box Culvert	SF	\$254			5359			\$1,361,186
Railroad Crossing								
Railroad Crossing		\$220,000			1			\$220,000
Traffic Items								
Traf separator	FT	\$44						
Signs	SF	\$14						
Pav Marking	FT	\$0.55	232		7360	\$128		\$4,048
Pav Marking thermoplastic	SF	\$17			227			\$3,859
Traffic signal	EA	\$200,000			1			200,000
Construction Traffic control	%	3%				\$3580	\$1538	\$86000
Landscaping								
Clearing and Grubbing	AC	\$22,00						
Removal of trees	EA	\$345						
Top soil	SY	\$3.3						
Mulch	CY	\$44						
Planting tree	EA	\$110						
Seed bed seeding	AC	\$2,360						
Lawn Const(sodded)	SF	\$1.00						
Shrubs & irrigation	SF	\$3.3						
Mitigation Measures	LS	N/a				\$7,744	\$3,325	\$185,939
Other Items								



Rem & reset fence	FT	\$33						
ROW Marker	EA	\$286						
Sidewalk	SY	\$77	340	132	3281	\$26,180	\$10,164	\$25,2637
Driveway	SY	\$99						
Curb ramp	EA	22,00						
Curbramp & gutter	FT	\$19	593	395	5997	\$11,267	\$7,505	\$113,943
Aggr base for shared-use path	TN	\$61						
Plantmix for share-use path	TN	\$105						
Guard rail	FT	\$66		68			\$4,488	
Cost of Construction item	\$	\$3,127,190				\$123,000	\$52790	\$2,951,400
Administrative costs	\$	\$100,000						
Mobilizations	%	5%				\$6,146	\$2,640	\$147,570
Constr Engr and contingencies	%	20%				\$25,812	\$11,086	\$619,794
<b>Total Construction cost</b>	<b>\$</b>	<b>\$3,995,920</b>				<b>\$210,654</b>	<b>\$66,505</b>	<b>\$3,718,761</b>
<b>Administrative Costs</b>	<b>\$</b>	<b>\$100,000</b>						
<b>Total Project Cost</b>						<b>\$210,654</b>	<b>\$92,673</b>	<b>\$4,767,814</b>
<b>Total Project Cost= \$5,171,141</b>								

## ECONOMIC AND MOBILITY IMPROVEMNETS

According to study done by Community Planning Association of Southwest Idaho (COMPASS). Total employment in freight-related sectors in Ada & Canyon county is between 60,000 and 70,000, including construction and utilities. This is around 22% to 25% of total employment. Retail also occupies a similar percentage of jobs, at around 21%. The remaining jobs are in the office or non-retail service sector.

The heat map (figure 5) show freight related job density and provides an initial visual sense of where freight activity takes place in the region. In the maps, a redder color is indicative of a high intensity of freight related Job density.

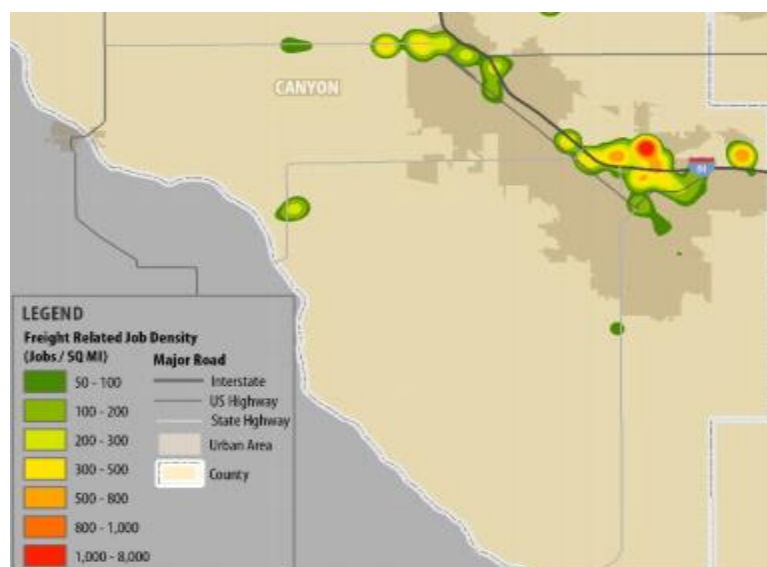


Figure 5 (Heat Map of Freight-Related Employment)

## TRAFFIC ANALYSIS

Traffic, freight and non-freight, will benefit from the proposed improvement from an increased speed through the signalized intersection rather than the existing stop controlled intersections.

Capacity and volumes will increase as part of the improvement project, especially when considering the number of potential industrial or commercial properties that will now be available along the frontage of the local street.

- Current Daily Traffic Volume**

Existing and Forecast Link Volumes

Calculated by: CCW

Date: 12/27/2016

Checked by: JW

Date: 1/6/2017

Roadway	Location	2016 Counts*			2016		2025	
		Total	Cars	Trucks	AADT	Truck AADT	AADT	Truck AADT
Franklin Blvd.	North of Exit 36 EB Off-ramp	15,361	14,401	960	16,600	1,000	18,800	1,100
	North of 3rd Ave. North	18,567	17,260	1,307	20,100	1,400	22,800	1,600
	North of Industrial Rd.	15,091	14,402	689	16,400	700	18,600	800
	South of Industrial Rd.	14,481	13,464	1,017	15,700	1,100	17,800	1,200
Exit 36 EB Off-Ramp	West of Franklin	3,362	3,048	314	3,600	300	4,100	300
3rd Ave. North	West of Franklin	2,029	1,892	137	2,200	100	2,500	100
Industrial Rd.	East of Franklin	3,443	2,968	475	3,700	500	6,900	900

*Current daily Traffic Volume*

- Peak hour annual growth rate shown below.**

		COMPASS PM Peak Model Volumes				
Roadway	Location	2015	2040	Annual Growth Rate (%)	2040 - I-84 3 lanes	Annual Growth Rate (%)
Franklin Blvd.	North of I-84 WB Ramps	1,146	2,154	2.56%	2,003	2.26%
	Between Ramp	1,795	2,304	1.00%	2,552	1.42%
	South of I-84 EB Ramps	2,328	2,984	1.00%	3,189	1.27%
	South of Industrial Way	2,192	2,646	0.76%	2,794	0.98%
I-84 Ramps	EB off	361	425	0.65%	641	2.32%
	EB on	801	905	0.49%	832	0.15%
	WB off	994	1,517	1.71%	1,073	0.31%
	WB on	333	124	-3.87%	550	2.03%
Industrial Way	East of Franklin	137	373	4.09%	609	6.15%
<b>Total</b>		<b>10,087</b>	<b>13,432</b>		<b>14,243</b>	
<b>Average Annual Growth Rate</b>				<b>1.15%</b>		<b>1.39%</b>

*Peak Hour Annual Growth Rate Data*



- Existing and future freight and non-freight Volume shown below.

**Existing and Forecast Link Volumes**

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*Existing and future Freight and Non-Freight Volume*

## **SAFETY BENEFITS**

The project improves safety by eliminating problematic intersections along Franklin Blvd and reducing conflict points to one signalized intersection. Between 2011-2015 there were 49 crashes, 12 of which were head-on, 4 were type A injuries, 6 were type B injuries, 6 were type C injuries and 33 were property damage crashes.

## CONCLUSION

The project will address freight movement and safety needs along a critical regional corridor. Funding the project will increase safety, spark economic development and improve freight efficiency. Some of the businesses around the area includes Mirage Trailers, Double R Trailers, Idaho Construction and Materials, Metal Products West, UPS, Forage Genetics and Rain for Rent. The Project will help maintain the economic vitality of the existing business and allow for the future development in Nampa's industrial zone (Figure 6).

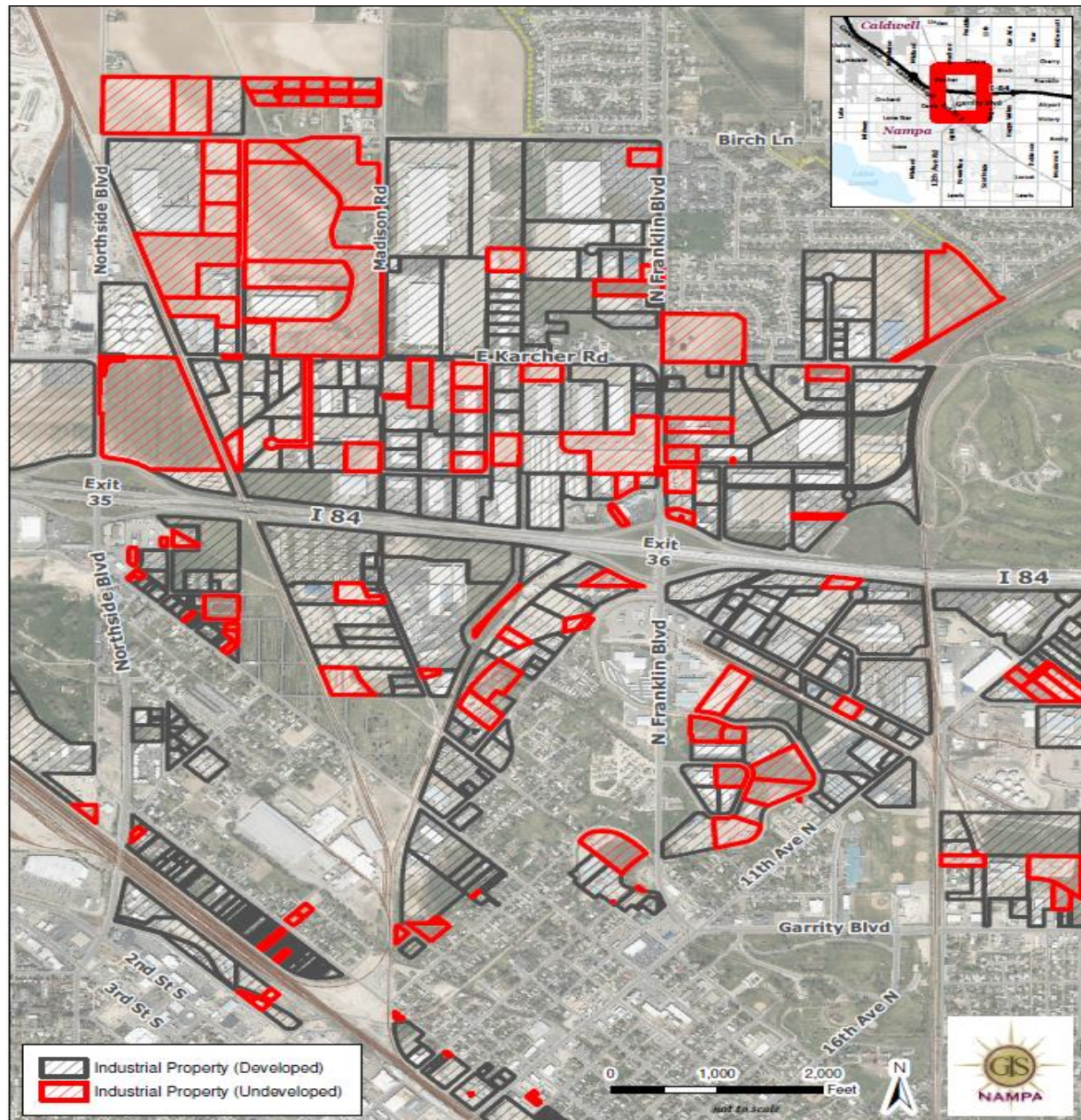


Figure 6 (Industrial Zone)